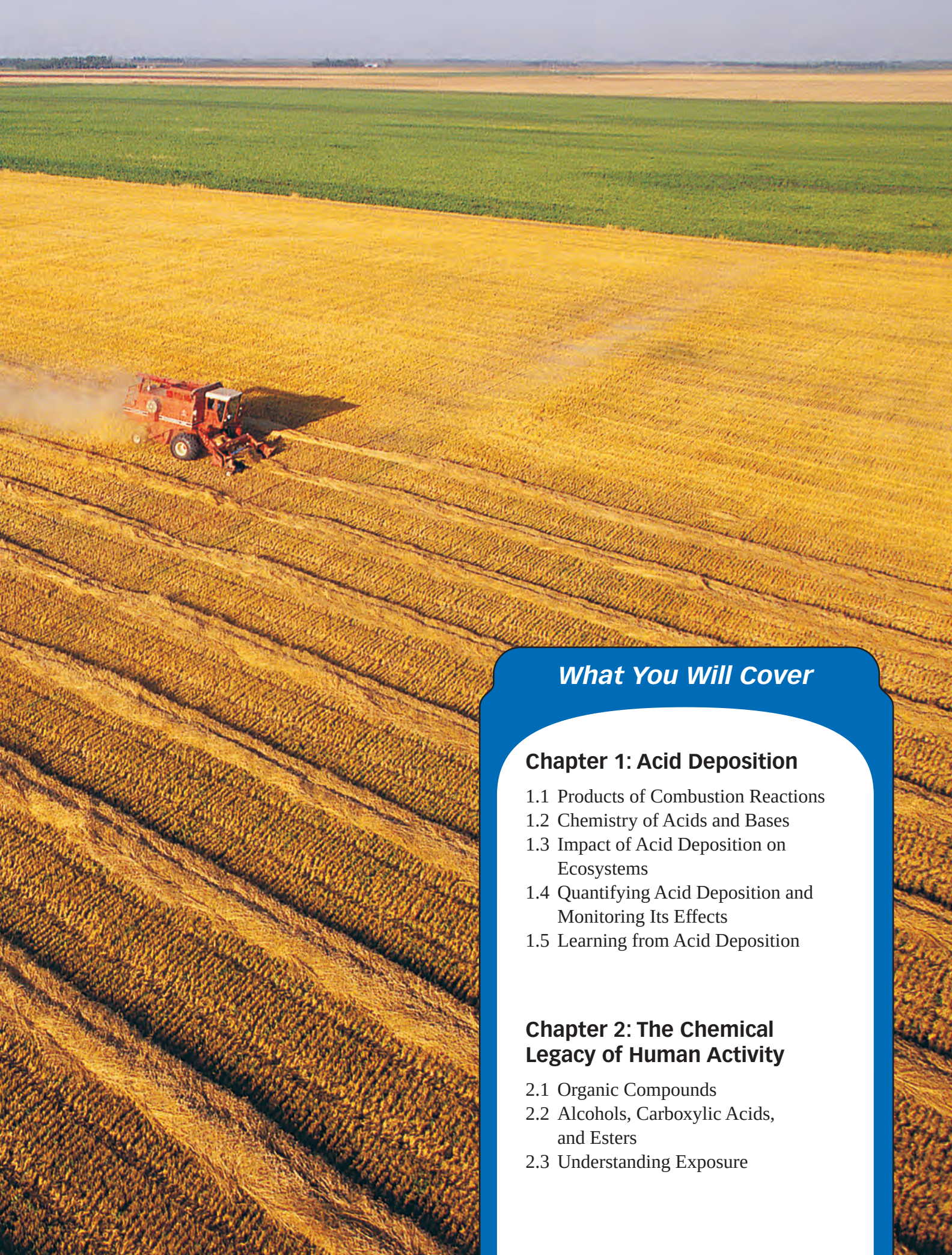
Unit B Chemistry and the Environment

The prairies during harvest are an impressive sight. After careful seeding and management of crops, farmers look forward to harvest time as the final step. As you have seen in Unit A, agriculture—although steeped in tradition—has benefited from new technologies: improved machinery for seeding and harvesting; herbicides to remove unwanted plants; and new varieties of hardier plants.

Advancements in technology provide a way to fulfill society's needs. Discoveries and developments in science and technology have changed the practices in modern-day agriculture. Recent innovations have improved the processes for refining raw materials and manufacturing consumer products.

The use of processes to manipulate raw materials is a common practice in chemistry. New combinations of atoms or the isolation of one substance from a mixture can have intended or unintended effects. The manipulation of matter, and other technologies, affects people and the environment.

In this unit you will find out about some chemical processes that are important to society. You will also learn about the environmental consequences of these processes and the actions being taken to counteract the unintended effects.



What You Will Cover

Chapter 1: Acid Deposition

1.1 Products of Combustion Reactions
1.2 Chemistry of Acids and Bases
1.3 Impact of Acid Deposition on Ecosystems
1.4 Quantifying Acid Deposition and Monitoring Its Effects
1.5 Learning from Acid Deposition

Chapter 2: The Chemical Legacy of Human Activity

2.1 Organic Compounds
2.2 Alcohols, Carboxylic Acids, and Esters
2.3 Understanding Exposure